

REMARKS

Claim 52 has been amended to recite that the chemically rechargeable anode includes at least one component oxidized during discharge and at least one component reduced during charge. Support for this amendment can be found in the specification.

Claims 53-113, which were withdrawn from consideration, have been canceled with prejudice. Applicants reserve the right to pursue claims similar or identical to 53-113 in one or more applications claiming priority the instant application.

Claims 1-5, 8-16, 18-20, 23-42, and 44-52 have been rejected. Claims 53-113 have been cancelled. The status of claims 6, 7, 17, 21, 22, and 43 is unclear. Applicants respectfully request clarification.

Rejections under 35 U.S.C. §112, ¶1

Claim 9 has been rejected under 35 U.S.C. §112, ¶1, as the Patent Office alleges that the specification does not reasonably provide enablement for all fuels. Applicants respectfully disagree.

At the outset, with respect to the claims in general, one of ordinary skill in the art, upon examining the specification, would understand that the present invention can be used with a wide range of fuels, and would be able to select such fuels without undue experimentation. The examiner is directed, for example, to page 11, line 18 to page 12, line 23 and page 14, lines 25-26. Accordingly, it is believed that the specification is enabling “fuel,” as recited in the claims as pending.

The rejection has been made with reference to claim 9. Claim 9 relates to a feature of one embodiment of the invention in which the device can produce electricity in the absence of fuel. This is supported in the specification as a whole, for example at page 24, lines 24-28. The rejection on this ground, focused on claim 9, is not understood, and clarification is requested if the rejection is continued. It is respectfully requested that the rejection be withdrawn.

Claims 49-51 have been rejected under 35 U.S.C. §112, ¶1, as the Patent Office alleges that “it is not clear whether each anode material listed has a ‘self-repairing’ property.” Applicants respectfully disagree. In the specification, for example, on page 18, lines 18-29, the term “self-repairing” is described, e.g., where a liquid anode of the device has the ability to act as sealant precursor. An example of a self-repairing device is further described, i.e., where the

device involves a liquid metal anode that is able to flow to substantially cover and/or substantially fill a crack within the device. Accordingly, it is believed that those of ordinary skill in the art would have the ability to construct a self-repairing device as claimed, based upon the teachings in the specification and the knowledge in the art, without undue experimentation, and it is therefore respectfully requested that rejection of claims 49-51 be withdrawn.

Rejections under 35 U.S.C. §102(b) in view of Mogensen

Claims 1-5, 8, 10-16, 18-20, and 23-39 have been rejected under 35 U.S.C. 102(b) as being anticipated by Mogensen, et al., U.S. Patent No. 5,350,641 ("Mogensen").

Applicants do not see where in Mogensen is there a disclosure or suggestion of a chemically rechargeable anode. The passage of Mogensen relied on in the Office Action to show a chemically rechargeable anode (col. 3, lines 23-57) actually describes the doping of CeO₂ electrode with a trivalent or divalent metal oxide. Such doping is used to prevent breakage of the electrode and dissolution of CeO₂ into cerium and oxygen ions, as well as to improve conductivity or volume stability of the electrode (see e.g., col. 3, line 17 to column 4, line 4). The doping methods of Mogensen are used only for the preparation of the electrodes, not their use, and do not teach a chemically rechargeable anode.

Accordingly, it is respectfully requested that rejection of claim 1 be withdrawn. Dependant claims 2-5, 8, 10-16, 18-20, and 23-39 depend, either directly or indirectly, from claim 1, and it is believed that these claims are also allowable for at least these reasons. Withdraw of the rejection of these claims is also respectfully requested.

Rejections under 35 U.S.C. §102(b) in view of Sapru

Claim 52 has been rejected under 35 U.S.C. §102(b) as being anticipated by Sapru, et al. U.S. Patent No.: 4,551,400 ("Sapru").

Applicants do not see where in Sapru is there a disclosure or a suggestion of an anode including at least one component oxidized during discharge and at least one component reduced during charge, as is recited in claim 52, as amended. Accordingly, it is respectfully requested that the rejection of claim 52 be withdrawn.

Rejections under 35 U.S.C. §102(e) in view of Priestnall

Claims 1, 35, 36, 40-42, and 44-48 have been rejected under 35 U.S.C. §102(e) as being anticipated by Priestnall et al., U.S. Patent Application Publication Number 2004/0058203 (“Priestnall”).

At the outset, Applicants do not concede that Priestnall is properly prior art to the Applicants’ claimed inventions. Applicants reserve the right to establish an invention date for the claimed inventions that is on or before the effective 35 U.S.C. §102(e) date of Priestnall relied on in the Office Action.

Yet to expedite prosecution of this particular application, it is noted that Applicants do not observe in Priestnall a disclosure or a suggestion of a chemically rechargeable anode. The paragraphs cited in the Office Action (e.g., paragraphs 0001-0003) describe fuel cells and batteries in general, but nowhere teach or suggest a chemically rechargeable anode. Other paragraphs relied on by the Office Action (e.g., paragraphs 0028, 0131, and 0136) describe various fuels, but nowhere teach or suggest a chemically rechargeable anode, as is recited in claim 1.

Accordingly, it is believed that Priestnall does not anticipate claim 1, and it is respectfully requested that rejection of claim 1 be withdrawn. Claims 35, 36, 40-42, and 44-48 depend, either directly or indirectly, from independent claim 1, and are believed to be allowable for at least the above-mentioned reasons. Withdraw of the rejection of these claims is also respectfully requested.

CONCLUSION

In view of the foregoing, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants’ representatives at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time.

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If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

By: 

Timothy J. Oyer, Ph.D., Reg. No. 36,628
Tani Chen, Sc.D., Reg. No. 52,728
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Telephone: (617) 720-3500

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